

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (*Currently Amended*) A method of reducing interferences in an electrochemical sensor comprising:

measuring a first current at a first working electrode, said first working electrode having an area being covered by a reagent layer;

measuring a second current at a second working electrode having a covered area coated by the reagent layer and an uncovered area not coated by the reagent layer such that intereferent current produced at the uncovered area is proportional to intereferent current produced overall; and

calculating a corrected current value representative of a glucose concentration using the measured first current, the measured second current, and a ratio of said covered area to said uncovered area of said second working electrode to reduce the effects of interferences.

2. (*Original*) The method of claim 1, wherein said corrected current value is calculated using the equation:

$$G = WE_1 - \left\{ \left(\frac{A_{cov}}{A_{unc}} \right) X (WE_2 - WE_1) \right\}$$

where G is the corrected current value, WE_1 is the uncorrected current density at said first working electrode, WE_2 is the uncorrected current density at said second working electrode, A_{cov} is the coated area of said second working electrode, and A_{unc} is the uncoated area of said second working electrode.

3. (*Currently Amended*) A method of reducing interferences in an electrochemical sensor comprising:

measuring a first current at a first working electrode, wherein said reagent layer partially covers said first working electrode, said first working electrode having a first coated area covered by said reagent layer and a first uncoated area not covered by said reagent layer;

measuring a second current at a second working electrode, wherein said reagent layer partially covers said second working electrode, said second working electrode having a second covered area coated by said reagent layer and a second uncovered area not coated by said reagent layer such that interferent current produced at the uncovered area is proportional to interferent current produced overall; and

calculating a corrected current value representative of a glucose concentration using the measured first current, the measured second current, and a ratio of said covered area to said uncovered area of said first and said second working electrodes to reduce the effects of interferents.

4. (*Previously presented*) The method of Claim 3, wherein said corrected current value is calculated using the equation:

$$G = WE_1 - \left\{ \left(\frac{f_1 + f_2}{f_2 - 1} \right) \times (WE_2 - WE_1) \right\}$$

where

$$f_1 = \frac{A_{cov1}}{A_{unc1}};$$

$$f_2 = \frac{A_{cov2}}{A_{unc2}};$$

A_{unc1} is an uncoated area of said first working electrode;

A_{unc2} is an uncoated area of said second working electrode;

A_{cov1} is a coated area of said first working electrode;

A_{cov2} is a coated area of said second working electrode;

G is the corrected current value;

WE_1 is the uncorrected current density at said first working electrode; and

WE_2 is the uncorrected density at said second working electrode.

5. *(Previously Presented)* The method of claim 1, in which the interferent comprises one or more of acetaminophen, gentistic acid, uric acid, and combinations thereof..

6. *(Previously Presented)* The method of one of claim 1 or claim 3, in which the interferent comprises one or more of acetaminophen, gentistic acid, uric acid, and combinations thereof.

7. *(Currently Amended)* A method of reducing interferences in an electrochemical sensor having a first and second working electrodes disposed on a substrate and an insulation disposed over electrodes and the substrate, the insulation having an opening to allow a reagent to contact portions of the first and second working electrodes, the method comprising:

measuring a first current at a first working electrode, said first working electrode having an area coated by the reagent;

measuring a second current at a second working electrode having an area coated by the reagent and an area uncoated by the reagent such that intereferent current produced at the uncoated area is proportional to interferent current produced overall; and

calculating a corrected current value representative of a glucose concentration using the measured first current, the measured second current, and a ratio of said coated area to said uncoated area of said second working electrode to reduce the effects of interferents.

8. (*Previously Presented*) The method of claim 7, in which said corrected current value is calculated using the equation:

$$G = WE_1 - \left\{ \left(\frac{A_{cov}}{A_{unc}} \right) X (WE_2 - WE_1) \right\}$$

where G is the corrected current value, WE_1 is the uncorrected current at said first working electrode, WE_2 is the uncorrected current at said second working electrode, A_{cov} is the coated area of said second working electrode, and A_{unc} is the uncoated area of said second working electrode.

9. (*Currently Amended*) A method of reducing interferences in an electrochemical sensor having a first and second working electrodes disposed on a substrate and an insulation disposed over electrodes and the substrate, the insulation having an opening to allow a reagent to contact portions of the first and second working electrodes, the method comprising:

measuring a first current at a first working electrode having a first coated area covered by the reagent and a first uncoated area not covered by the reagent;

measuring a second current at a second working electrode having a second covered area coated by said reagent and a second uncovered area not coated by said reagent such that intereferent current produced at the uncovered area is proportional to interferent current produced overall; and

calculating a corrected current value representative of a glucose concentration using the measured first current, the measured second current, and a ratio of said covered area to said uncovered area of said first and said second working electrodes to reduce the effects of interferences.

10. (*Previously Presented*) The method of Claim 9, wherein said corrected current value is calculated using the equation:

$$G = WE_1 - \left\{ \left(\frac{f_1 + f_2}{f_2 - 1} \right) \times (WE_2 - WE_1) \right\}$$

where

$$f_1 = \frac{A_{cov1}}{A_{unc1}};$$

$$f_2 = \frac{A_{cov2}}{A_{unc2}};$$

A_{unc1} is an uncoated area of said first working electrode;

A_{unc2} is an uncoated area of said second working electrode;

A_{cov1} is a coated area of said first working electrode;

A_{cov2} is a coated area of said second working electrode;

G is the corrected current value;

WE_1 is the uncorrected current density at said first working electrode; and

WE_2 is the uncorrected density at said second working electrode.